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Conference Abstract

Developing the Digital Museum Using Various Images and Geographic Information Systems

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Abstract

Digital archiving of museum collections is a global trend, but web platforms for archival data are not yet well developed. Many of the portal sites developed in Japan lack images and geographical information, making them difficult to use for non-specialists. Therefore, local museums, such as the Lake Biwa Museum, require web platforms that are easy to use for local users.

Recently, rapid developments in digital technology have made it easier and cheaper to customize web platforms. Furthermore, the Japanese Government now provides financial support for the digitization of collections. This has made it possible for museum staff, who are not specialized in digital technology, to develop web platforms. Two projects have therefore been set up.

Digital Museums using Various Images (DMVI): 3D and high-resolution images of various collections are made available on websites as databases for the museums' collections, which can also be used for exhibitions.

Digital Museums using Geographical Information Systems (DMGIS): in addition to distribution maps of specimens and survey data, maps from the past to the present can be superimposed to understand the changes in the habitats of living organisms.

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The 3D models developed by DMVI can be rotated, enlarged, and reduced, providing a new experience as if you were holding a valuable material that you would not normally be able to touch. The DMVI project is also working towards the development of illustrated databases limited to the organisms found in Shiga Prefecture. Meanwhile, the easy-to-use illustrated search system, DMGIS, is promoting information on bird distributions and cross-disciplinary mapping. For example, specimens and observation data can be plotted and viewed on current maps, and changes in the distribution of birds can be followed along a time axis. This content is intended for use in environmental education and nature conservation. By building an easy-to-use web platform, the aim is to develop a ‘digital museum.’

Keywords

digital archive, 3D models, environmental education, nature conservation

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Conflicts of interest

The authors have declared that no competing interests exist.